

**Amendments to the Specification:**

Please replace the paragraph beginning on page 1, line 4 with the following rewritten paragraph:

--Reference is made to commonly assigned pending U.S. Patent Application Serial No. 10/823,446 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled CONTAINER FOR INHIBITING MICROBIAL GROWTH IN LIQUID NUTRIENTS by David L. Patton, Joseph F. Bringley, Richard W. Wien, John M. Pochan, Yannick J. F. Lerat (~~docket 87472~~); pending U.S. Patent Application Serial No. 10/823,443 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled USE OF DERIVATIZED NANOPARTICLES TO MINIMIZE GROWTH OF MICRO-ORGANISMS IN HOT FILLED DRINKS by Richard W. Wien, David L. Patton, Joseph F. Bringley, Yannick J. F. Lerat (~~docket 87471~~); pending U.S. Patent Application Serial No. 10/822,945 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled ARTICLE FOR INHIBITING MICROBIAL GROWTH IN PHYSIOLOGICAL FLUIDS by Joseph F. Bringley, David L. Patton, Richard W. Wien, Yannick J. F. Lerat (~~docket 87833~~); pending U.S. Patent Application Serial No. 10/822,940 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled DERIVATIZED NANOPARTICLES COMPRISING METAL-ION SEQUESTRAINT by Joseph F. Bringley (~~docket 87428~~); ~~and~~ pending U.S. Patent Application Serial No. 10/822,929 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled COMPOSITION OF MATTER COMPRISING POLYMER AND DERIVATIZED NANOPARTICLES by Joseph F. Bringley, Richard W. Wien, ~~Richard L. Patton~~ David L. Patton (~~DOCKET 87708~~), and pending U.S. Patent Application Serial No. 10/822,939 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled COMPOSITION COMPRISING INTERCALATED METAL-ION SEQUESTRANTS by Joseph F. Bringley, David L. Patton, Richard W. Wien (~~docket 87765~~) the disclosures of which are incorporated herein by reference.--

Please replace the paragraph beginning on page 12, line 27 with the following rewritten paragraph:

--In a preferred embodiment the packaging material comprises derivatized nanoparticles comprising inorganic nanoparticles having an attached metal-ion sequestrant, wherein said inorganic nanoparticles have an average

particle size of less than 200 nm and the derivatized nanoparticles have a stability constant greater than  $10^{10}$  with iron (III). It is further preferred that the derivatized nanoparticles have a stability constant greater than  $10^{20}$  with iron (III). The derivatized nanoparticles are preferred because they have very high surface area and may have a very high-affinity for the target metal-ions. It is preferred that the nanoparticles have an average particle size of less than 100 nm. It is further preferred that the nanoparticles have an average size of less than 50 nm, and most preferably less than 20 nm. Preferably greater than 95% by weight of the nanoparticles are less than 200 nm, more preferably less than 100 nm, and most preferably less than 50 nm. This is preferred because as the particle size becomes smaller, the particles scatter visible-light less strongly. Therefore, the derivatized nanoparticles can be applied to clear, transparent surfaces without causing a hazy or a cloudy appearance at the surface. This allows the particles of the present invention to be applied to packaging materials without changing the appearance of the item. It is preferred that the nanoparticles have a very high surface area, since this provides more surface with which to covalently bind the metal-ion sequesterant, thus improving the capacity of the derivatized nanoparticles for binding metal-ions. It is preferred that the nanoparticles have a specific surface area of greater than  $100 \text{ m}^2/\text{g}$ , more preferably greater than  $200 \text{ m}^2/\text{g}$ , and most preferably greater than  $300 \text{ m}^2/\text{g}$ . For applications of the invention in which the concentrations of contaminant or targeted metal-ions in the environment is high, it is preferred that the nanoparticles have a particle size of less than 20 nm and a surface area of greater than  $300 \text{ m}^2/\text{g}$ . Derivatized nanoparticles are described at length in pending U.S. Patent Application Serial No. 10/822,940 [ ] filed April 13, 2004 ~~herewith~~ entitled DERIVATIZED NANOPARTICLES COMPRISING METAL-ION SEQUESTRAINT by Joseph F. Bringley.--

Please replace the paragraph beginning on page 19, line 13 with the following rewritten paragraph:

--Now referring to Figures 3a and 3b, there is illustrated a side view of a rigid packaging material formed into a polystyrene tray 100 made in accordance with the present invention. Figure 4 illustrates an enlarged partial cross-sectional view of the polystyrene tray 100 of Figure 3. Figure 5 illustrates

yet a further enlarged partial cross-sectional view of Figure 4. Now referring to Figures 4 and 5, the polystyrene tray 100 incorporates a polystyrene material 110 containing derivatized particles 15 comprising an inorganic core material 120 and a shell material 130 made of the metal-ion sequestering agent such as EDTA as described above and in pending U.S. Patent Application Serial No. 10/822,940 [\_\_\_\_\_] filed April 13, 2004 ~~herewith~~ entitled DERIVATIZED NANOPARTICLES COMPRISING METAL-ION SEQUESTRAINT by Joseph F. Bringley. The “free” iron ion 35 as indicated by the arrows 137 move to reach and be captured by the derivatized particle 15.--